

--In a further aspect of the invention, a method of providing a system of inclined eccentric sub-geosynchronous satellite orbits includes the steps of:

defining at least one geographic service area within which satellite coverage is to be provided, said service area having a minimum elevation angle thereabove;

defining at least two satellite orbits above the minimum service area having a first satellite and a second satellite respectively therein;

operating said first satellite to generate a plurality of fixed cells relative to the earth by varying the beam width and steering the boresight of the beams generated during operation in an active arc of an orbit;

handing over operation from the first satellite to the second satellite to maintain at least the minimum elevation angle; and

operating said second satellite to generate the plurality of fixed cells by varying the beam width and steering the boresight of the beams generated during operation in the active arc of an orbit.--

Please delete the first full paragraph on page 8 and substitute therefor the following replacement paragraph:

--The present invention is illustrated herein in terms of a satellite orbit system using various inclination angles, eccentricity values and other values. It should be understood that specific numerical values are introduced as examples and not as final design values. Also, the preferred embodiment includes one satellite per orbit. However, more than one satellite could be employed.--

Please delete the first and second full paragraphs on page 18 and substitute therefor the following replacement paragraph:

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--Another advantage of the present invention is that the terminals track satellites in a semi-geostationary manner using scanning angles of less than 20°.

A3 As shown, the landmasses of the earth may be separated as three zones [1] North and South America, [2] Europe, Africa, Mid-East and India, and [3] China, East Asia, Australia, and New Zealand. Each zone would have only a dedicated active satellite at each moment. For business, which involves geographically closer communication, this arrangement would be a great benefit since a satellite can see the whole landmass in each zone and no inter-satellite link is necessary. For business which involves transoceanic communication (US-Asia, US-Europe, and Europe-Asia), the inter-continent traffic may be carried either through partnering with the undersea cable or the long-haul fiber companies. An optical intersatellite link (ISL) may also be used. Inter-satellite-links (ISL) however, may not be considered because of a correspondingly long development time. If the constraint of short "time-to-market" period is present, the undersea cable aspect may be more easily implemented than an ISL.--

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Please delete the last full paragraph on page 19, and substitute therefor the following replacement paragraph:

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A4 --As is illustrated, each cell is not only equal in size but also is fixed relative to the motion of satellites. The cell size selection may vary in each system when balanced with design tradeoffs in EIRP, antenna complexity, and intended coverage areas. To implement such a system, a phase array based satellite antenna with 500 to 1500 elements may be used.--

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